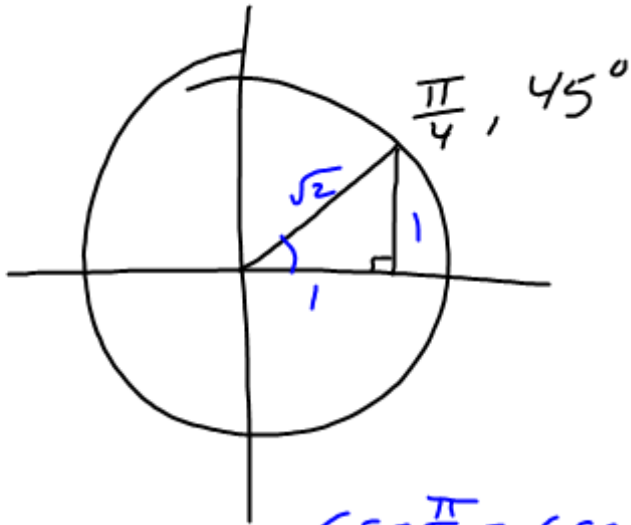


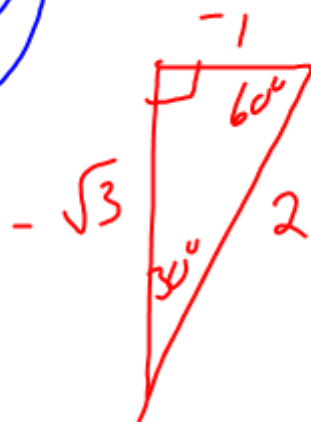
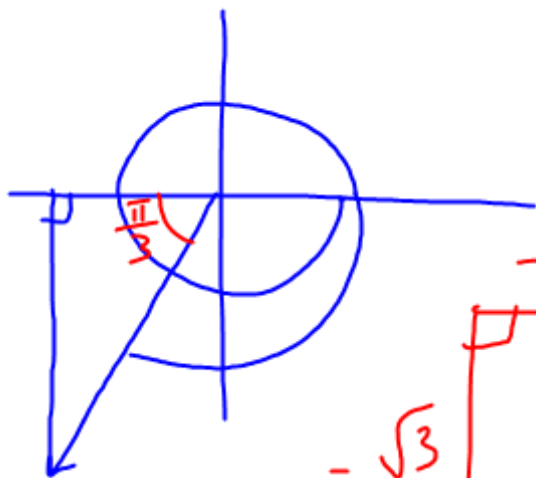
(62)



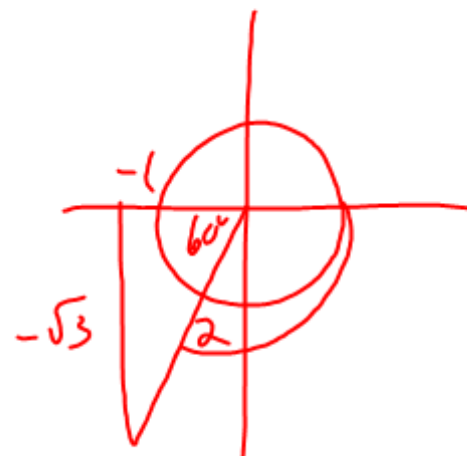
$$\csc \frac{\pi}{4} = \csc 45^\circ = \frac{\sqrt{2}}{1} = \sqrt{2}$$

#71

$$\sin\left(-\frac{8\pi}{3}\right) \Rightarrow \sin\left(-\frac{6\pi}{3} + -\frac{2\pi}{3}\right) \Rightarrow \sin(-480)$$

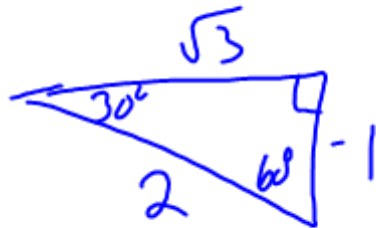
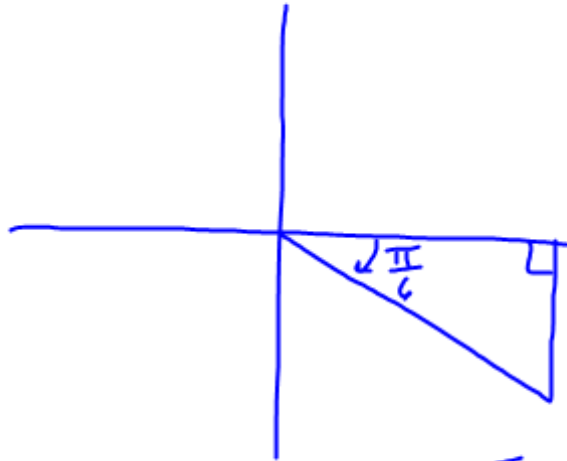


$$\frac{-\sqrt{3}}{2}$$



#74

$$\cos\left(-\frac{\pi}{6}\right) = \frac{\sqrt{3}}{2}$$



Convert

Degrees	Radians
$80^\circ$	$\frac{4\pi}{9}$
$60^\circ$	$\frac{\pi}{3}$
$\approx 229.18$	4
$240^\circ$	$\frac{4\pi}{3}$

$$\frac{180^\circ}{\pi \text{ rad}} = \frac{80^\circ}{x}$$

$$x = \frac{80\pi}{180} = \frac{4\pi}{9}$$

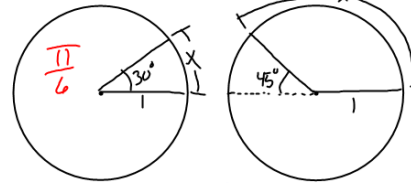
$$\frac{180^\circ}{\pi} = \frac{x^\circ}{4}$$

$$\frac{720}{\pi} = x$$

$$x \approx 229.18$$

② What is a radian  
angle that cuts off an arc  
the same length as the radius  
unit of measuring angles

③ Find exact measure of  $x$



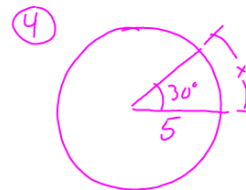
$$C = 2\pi r = 2\pi \cdot 6 = 12\pi$$

$$\text{Arc} = \frac{30}{360} \cdot 12\pi = \pi$$

$$\frac{x}{30} = \frac{\pi}{180}$$

$$x = \frac{30\pi}{180} = \frac{\pi}{6}$$

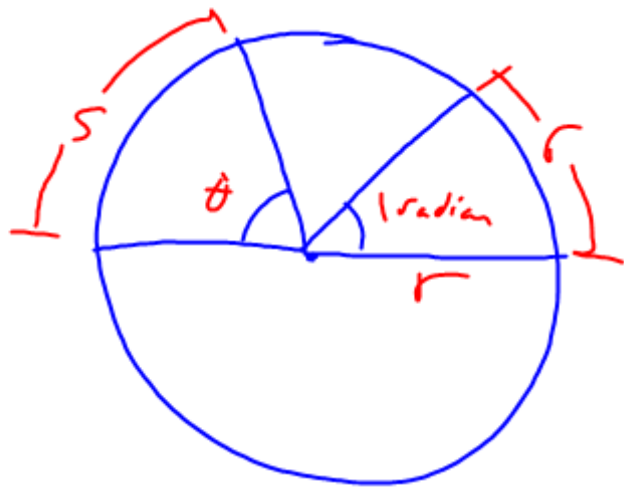
$$x = \frac{3\pi}{4}$$



$$\frac{5\pi}{6}$$

$$\frac{15\pi}{4}$$

$$S = r\theta \rightarrow \begin{array}{l} \text{arc length} \swarrow \quad \searrow \text{radius} \quad \rightarrow \text{angle in radians} \end{array}$$



$$\frac{S}{r} = \frac{\theta}{1}$$

Area Sector



$$\frac{\theta}{2\pi} (\pi r^2)$$

$$A = \frac{1}{2} r^2 \theta$$

radius      radians

Read ex. 2-4 understand  $\approx 10\text{min}$  in 3.2

Sect. 3.2 # 1-6, 9, 11, 13, 17, 19-24, 27-31, 39, 47